STIC Biotechnology Systems Branch

RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/549,352
Source: PCT
Date Processed by STIC: 09/28/2005

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:
1) **INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
2) **TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, **PLEASE** USE THE **CHECKER VERSION 4.2.2 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:
http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.
Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.
Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<**http://www.uspto.gov/ebc/efs/downloads/documents.htm**>, **EFS Submission User Manual** - ePAVE)
2. **U.S. Postal Service:** Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. **Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05):** U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/24/05

Raw Sequence Listing Error Summary

ERROR DETECTED	SUGGESTED CORRECTION	SERIAL NUMBER: 10/549,352

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

1	Wrapped Nucleics Wrapped Aminos	The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
2	Invalid Line Length	The rules require that a line **not exceed** 72 characters in length. This includes white spaces.
3	Misaligned Amino Numbering	The numbering under each 5th amino acid is misaligned. **Do not** use tab codes between numbers; use **space characters**, instead.
4	Non-ASCII	The submitted file was **not** saved in ASCII(DOS) text, as **required** by the Sequence Rules. **Please ensure your subsequent submission is saved in ASCII text.**
5	Variable Length	Sequence(s)____contain n's or Xaa's representing more than one residue. **Per Sequence Rules, each n or Xaa can only represent a single residue.** Please present the **maximum** number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
6	PatentIn 2.0 "bug"	A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. **This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.**
7	Skipped Sequences (OLD RULES)	Sequence(s) _____ missing. If intentional, please insert the following lines for **each** skipped sequence: (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading) (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown) This sequence is intentionally skipped Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to **include** the skipped sequences.
8	Skipped Sequences (NEW RULES)	Sequence(s) _____ missing. If **intentional**, please insert the following lines for **each** skipped sequence. <210> sequence id number <400> sequence id number 000
9	Use of n's or Xaa's (NEW RULES)	Use of n's and/or Xaa's have been detected in the Sequence Listing. Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present. In <220> to <223> section, please explain location of **n** or **Xaa**, and which residue **n** or **Xaa** represents.
10	Invalid <213> Response	Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is **required** when <213> response is Unknown or ~~is Artificial Sequence~~
11	Use of <220>	Sequence(s) _____ missing the <220> "Feature" and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section. (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
12	PatentIn 2.0 "bug"	Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
13	Misuse of n/Xaa	"n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid

PCT

RAW SEQUENCE LISTING DATE: 09/28/2005
PATENT APPLICATION: US/10/549,352 TIME: 13:53:52

Input Set : A:\70237USPCT SEQUENCE LISTING.txt
Output Set: N:\CRF4\09282005\J549352.raw

<110> APPLICANT: DRAKE, Caroline Rachel
PAINE, Jacqueline Ann Mary
SHIPTON, Catherine Ann
<120> TITLE OF INVENTION: ENHANCED ACCUMULATION OF CAROTENOIDS IN PLANTS
<130> FILE REFERENCE: 70237USPCT
C--> <140> CURRENT APPLICATION NUMBER: US/10/549,352
C--> <141> CURRENT FILING DATE: 2005-09-14
<150> PRIOR APPLICATION NUMBER: PCT/GB2004/001241
<151> PRIOR FILING DATE: 2004-03-22
<150> PRIOR APPLICATION NUMBER: US60/457,053
<151> PRIOR FILING DATE: 2003-03-24
<160> NUMBER OF SEQ ID NOS: 38
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<212> TYPE: DNA
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Does Not Comply
Corrected Diskette Needed
Cpg-1, 3, 5,
Invalid Response,
Organism can be Either Artificial, Unknown or Genus Species, Pls' See Item # 10 on Error Summary Sheet.

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same Error

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Input Set : A:\70237USPCT SEQUENCE LISTING.txt
Output Set: N:\CRF4\09282005\J549352.raw

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370 tttgatcttt ctttaaactg atctattttt taattgattg gttatcgtgt aaatattaca 4020
372 tagctttaac tgataatctg attactttat ttcgtgtgtc tttgatcatc ttgatagtta 4080
374 cagaaccgtc gactctagag aagccattta aatcgccgcc accatggcca tcatactcgt 4140
376 acgagcagcg tcgccggggc tctccgccgc cgacagcatc agccaccagg ggactctcca 4200
378 gtgctccacc ctgctcaaga cgaagaggcc ggcggcgcgc cggtggatgc cctgctcgct 4260
380 ccttggcctc cacccgtggg aggctggccg tccctccccc gccgtctact ccagcctcgc 4320
382 cgtcaacccg gcgggagagg ccgtcgtctc gtccgagcag aaggtctacg acgtcgtgct 4380

RAW SEQUENCE LISTING DATE: 09/28/2005
PATENT APPLICATION: US/10/549,352 TIME: 13:53:52

Input Set : A:\70237USPCT SEQUENCE LISTING.txt
Output Set: N:\CRF4\09282005\J549352.raw

384 caagcaggcc gcattgctca aacgccagct gcgcacgccg gtcctcgacg ccaggcccca 4440
386 ggacatggac atgccacgca acgggctcaa ggaagcctac gaccgctgcg gcgagatctg 4500
388 tgaggagtat gccaagacgt tttacctcgg aactatgttg atgacagagg agcggcgccg 4560
390 cgccatatgg gccatctatg tgtggtgtag gaggacagat gagcttgtag atgggccaaa 4620
392 cgccaactac attacaccaa cagctttgga ccggtgggag aagagacttg aggatctgtt 4680
394 cacgggacgt ccttacgaca tgcttgatgc cgctctctct gataccatct caaggttccc 4740
396 catagacatt cagccattca gggacatgat tgaagggatg aggagtgatc ttaggaagac 4800
398 aaggtataac aacttcgacg agctctacat gtactgctac tatgttgctg gaactgtcgg 4860
400 gttaatgagc gtaccagtga tgggcatcgc atccgagtct aaagcaacaa ctgaaagcgt 4920
402 gtacagtgct gccttggctc tcggaattgc gaaccaactc acgaacatac tccgggatgt 4980
404 tggagaggat gctagacgag gaaggatata tttaccacaa gatgagcttg cacaggcagg 5040
406 gctctctgat gaggacatct tcaaaggggt cgtcacgaac cggtggagaa acttcatgaa 5100
408 gaggcagatc aagagggcca ggatgttttt tgaggaggca gagagagggg taactgagct 5160
410 ctcacaggct agcagatggc cagtatgggc ttccctgttg ttgtacaggc agatcctgga 5220
412 tgagatcgaa gccaacgact acaacaactt cacgaagagg gcgtatgttg gtaaagggaa 5280
414 gaagttgcta gcacttcctg tggcatatgg aaaatcgcta ctgctcccat gttcattgag 5340
416 aaatggccag acctagggcc atgcaggccg atccccgatc gttcaaacat ttggcaataa 5400
418 agtttcttaa gattgaatcc tgttgccggt cttgcgatga ttatcatata atttctgttg 5460
420 aattacgtta agcatgtaat aattaacatg taatgcatga cgttatttat gagatgggtt 5520
422 tttatgatta gagtcccgca attatacatt taatacgcga tagaaaacaa aatatagcgc 5580
424 gcaaactagg ataaattatc gcgcgcggtg tcatctatgt tactagatcg 5630
427 <210> SEQ ID NO: 3
429 <211> LENGTH: 5180
431 <212> TYPE: DNA
433 <213> ORGANISM: SYNTHETIC - 12422
437 <400> SEQUENCE: 3
438 gttaatcatg gtgtaggcaa cccaaataaa acaccaaaat atgcacaagg cagtttgttg 60
440 tattctgtag tacagacaaa actaaaagta atgaaagaag atgtggtgtt agaaaaggaa 120
442 acaatatcat gagtaatgtg tgagcattat gggaccacga aataaaaaga acattttgat 180
444 gagtcgtgta tcctcgatga gcctcaaaag ttctctcacc ccggataaga aacccttaag 240
446 caatgtgcaa agtttgcatt ctccactgac ataatgcaaa ataagatatc atcgatgaca 300
448 tagcaactca tgcatcatat catgcctctc tcaacctatt cattcctact catctacata 360
450 agtatcttca gctaaatgtt agaacataaa cccataagtc acgtttgatg agtattaggc 420
452 gtgacacatg acaaatcaca gactcaagca agataaagca aaatgatgtg tacataaaac 480
454 tccagagcta tatgtcatat tgcaaaaaga ggagagctta taagacaagg catgactcac 540
456 aaaaattcat ttgcctttcg tgtcaaaaag aggagggctt tacattatcc atgtcatatt 600
458 gcaaaagaaa gagagaaaga acaacacaat gctgcgtcaa ttatacatat ctgtatgtcc 660
460 atcattattc atccaccttt cgtgtaccac acttcatata tcatgagtca cttcatgtct 720
462 ggacattaac aaactctatc ttaacattta gatgcaagag cctttatctc actataaatg 780
464 cacgatgatt tctcattgtt tctcacaaaa agcattcagt tcattagtcc tacaacaacg 840
466 aattcggctt cccaaatcgc cgccaccatg gcttctatga tatcctcttc cgctgtgaca 900
468 acagtcagcc gtgcctctag ggggcaatcc gccgcagtgg ctccattcgg cggcctcaaa 960
470 tccatgactg gattcccagt gaagaaggtc aacactgaca ttacttccat tacaagcaat 1020
472 ggtggaagag taaagtgcat gaaaccaact acggtaattg gtgcaggctt cggtggcctg 1080
474 gcactggcaa ttcgtctaca agctgcgggg atccccgtct tactgcttga acaacgtgat 1140
476 aaacccggcg gtcgggctta tgtctacgag gatcaggggt ttacctttga tgcaggcccg 1200
478 acggttatca ccgatcccag tgccattgaa gaactgtttg cactggcagg aaaacagtta 1260
480 aaagagtatg tcgaactgct gccggttacg ccgttttacc gcctgtgttg ggagtcaggg 1320
482 aaggtcttta attacgataa cgatcaaacc cggctcgaag cgcagattca gcagtttaat 1380

Same Error, Organism Can be Either Artificial, Unknown, or Genus Species. Pls see Item #1 on Error Summary Sheet

The type of errors shown exist throughout the Sequence Listing. Please check subsequent sequences for similar errors.

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 09/28/2005
PATENT APPLICATION: US/10/549,352 TIME: 13:53:53

Input Set : A:\70237USPCT SEQUENCE LISTING.txt
Output Set: N:\CRF4\09282005\J549352.raw

Use of <220> Feature(NEW RULES):
Sequence(s) __ are missing the <220> Feature and associated headings.
Use of <220> to <223> is MANDATORY if <213> ORGANISM is "Artificial Sequence" or "Unknown". Please explain source of genetic material in <220> to <223> section (See "Federal Register," 6/01/98, Vol. 63, No. 104,pp.29631-32) (Sec.1.823 of new Rules)

Seq#:22

VERIFICATION SUMMARY DATE: 09/28/2005
PATENT APPLICATION: US/10/549,352 TIME: 13:53:53

Input Set : A:\70237USPCT SEQUENCE LISTING.txt
Output Set: N:\CRF4\09282005\J549352.raw

L:16 M:270 C: Current Application Number differs, Replaced Current Application No
L:16 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:2513 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:22
L:2517 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ#:22, <213>
ORGANISM:Artificial Sequence
L:2517 M:258 W: Mandatory Feature missing, <223> Tag not found for SEQ#:22, <213>
ORGANISM:Artificial Sequence
L:2517 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:22,Line#:2517